Thank you Scott.

Sent from my iPhone

On Jan 9, 2016, at 8:29 AM, Scott Quinlan <s.quinlan@gaiconsultants.com> wrote:

Doug:

The minimum slope for the underdrain is 2%. For the maximum slopes, we would be designing to limit velocity to say <10-fps. For 6 and 8-inch pipes that would require at most 8% and 5% slopes, respectively.

The sentence suggesting Pond D Passive Underdrainage is "unregulated" should have referred to the Pond D Toe Drain. We want the underdrainage to be controlled as conveyed in the Block Flow Diagrams.

Let me know if you have any other questions. Thanks.

Sincerely,

Scott C. Quinlan, PE
Director – Energy Water Resources Engineering and Planning

GAI Consultants, Inc.
500 Cranberry Woods Drive, Cranberry Township, PA 16066
D 412.399.5385 <image001.png> | **M** 412.584.4508 | **F** 724.770.2011 |
<image002.png><image003.png><image004.png><image005.png><image006.png> <image007.png>
<image008.png>

From: Doug Wight (Generation - 34) [mailto:doug.wight@dom.com]
Sent: Thursday, January 07, 2016 4:18 PM
To: Scott Quinlan <s.quinlan@gaiconsultants.com>; Michael A Glagola (Generation - 34) <michael.a.glagola@dom.com>
Cc: Jeffrey R Marcell (Generation - 3) <jeffrey.r.marcell@dom.com>; Matthew M Woodzell (Generation - 3) <matthew.m.woodzell@dom.com>; John Klamut <J.Klamut@gaiconsultants.com>; John DeBarbieri <J.DeBarbieri@gaiconsultants.com>; John A Cima (Generation - 34) <John.A.Cima@dom.com>; Doug Wight (Generation

- 34) <doug.wight@dom.com>
Subject: RE: Possum Point Sanitary Forcemain Tie In Options

Scott,

Thank you for the layout for the two PWCSA supply options. I think this answers the questions on feasibility of the two options.

What slope will be allowed for the horizontal runs to the pumping station?

Also, you mention that the D Passive Under drainage system would be "unregulated" in the system flow section, while it has an automatic control valve in the Conceptual section. Please clarify.

Thanks,
Doug

From: Scott Quinlan [mailto:s.quinlan@gaiconsultants.com]
Sent: Tuesday, January 05, 2016 12:29 PM
To: Michael A Glagola (Generation - 34)
Cc: Doug Wight (Generation - 34); Jeffrey R Marcell (Generation - 3); Matthew M Woodzell (Generation - 3); John Klamut; John DeBarbieri
Subject: Possum Point Sanitary Forcemain Tie In Options

Mike:

We've evaluated two options for the sanitary forcemain tie in / pump stations:

- Option A (Two Pump Stations, one for metals cleaning waste / Pond D Underdrain; one for Pond D Toe Drain)
- Option B (Single Pump Station for metals cleaning waste / Pond D Underdrain / Pond D Toe Drain)

Although other options were considered, these were the most cost effective. Essentially, single pump station option (B) is slightly less expensive. However, considering life cycle costs, this option will be much less expensive.

Enclosed are a conceptual description, flow diagram, estimated schedule, and conceptual budgetary cost estimate for each option. If needed, this schedule can be tightened up by a month or so. Also, attached is an arial image identifying the presumed electrical power source.

We can arrange for a conference call this week to discuss. Let me know what works for the team.   Thanks.

Sincerely,

Scott C. Quinlan, PE
Director – Energy Water Resources Engineering and Planning

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